

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>PU5004WO</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 03/39740</b>	International filing date ( <i>day/month/year</i> ) <b>12/12/2003</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>13/12/2002</b>
Applicant <b>SMITHKLINE BEECHAM CORPORATION</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 8 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :
  - contained in the international application in written form.
  - filed together with the international application in computer readable form.
  - furnished subsequently to this Authority in written form.
  - furnished subsequently to this Authority in computer readable form.
  - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2.  Certain claims were found unsearchable (See Box I).

3.  Unity of invention is lacking (see Box II).

4. With regard to the title,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

None of the figures.

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International application No.

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## Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

## INTERNATIONAL SEARCH REPORT

International Application No

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D451/02 C07D413/06 C07D413/14 C07D471/10 C07D417/14  
 A61K31/46 A61P31/18

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/58292 A (SANOFI-SYNTHELABO) 5 October 2000 (2000-10-05) claim 1; examples ---	1-25
X	WO 96/23787 A (SANOFI) 8 August 1996 (1996-08-08) claim 1; examples ---	1-25
X	WO 02/094821 A (SANOFI-SYNTHELABO) 28 November 2002 (2002-11-28) claim 1; examples ---	1-25
X	EDMONDS-ALT ET AL.: THE JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS, vol. 303, no. 3, 2002, pages 1171-79, XP002280312 figure 1 ---	1-25
	-/-	

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

14 May 2004

Date of mailing of the international search report

03/06/2004

Name and mailing address of the ISA

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International Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ALI ET AL.: BIOORG. MED. CHEM. LETT., vol. 11, 2001, pages 819-822, XP002280313 figure 1A ---	1-25
X	NISHI ET AL.: BIOORG. MED. CHEM. LETT. , vol. 10, 2000, pages 1665-68, XP002280314 examples ---	1-25
X	JP 01 031570 A (SANKYO) 1 February 1989 (1989-02-01) examples ---	1-25
Y	WO 02/079194 A (SCHERRING CORP) 10 October 2002 (2002-10-10) the whole document ---	1-42
Y	WO 02/05819 A (BONDINELL WILLIAM E ;SMITHKLINE BEECHAM CORP (US); NEEB MICHAEL J) 24 January 2002 (2002-01-24) the whole document ---	1-42
Y	PALANI A ET AL: "Discovery of 4-'(Z)-(4-Bromophenyl)-(ethoxyimino)methyl !-1'-(2,4-dim ethyl-3-pyridinyl)carbonyl!-4'-methyl-1,4' -bipiperidine N-Oxide (SCH 351125): An Orally Bioavailable Human CCR5 Antagonist for the Treatment of HIV Infection" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. WASHINGTON, US, vol. 44, no. 21, 11 October 2001 (2001-10-11), pages 3339-3342, XP002220286 ISSN: 0022-2623 the whole document ---	1-42
Y	WO 02/081449 A (NOVARTIS ERFIND VERWALT GMBH ;ALBERT RAINER (CH); NOVARTIS AG (CH)) 17 October 2002 (2002-10-17) the whole document -----	1-42

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

Continuation of Box I.2

Present claims 1-42 relate to an extremely large number of possible compounds. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compounds of formula (I) in which B-R1 represents a 6-phenyl-1,3-oxazinanyl or a 2-phenyl morpholinyl (i.e. R1 is phenyl) which are supported by the examples.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

International application No.  
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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:  
**Although claims 26–30, 40–42 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.**
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
**see FURTHER INFORMATION sheet PCT/ISA/210**
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/39740

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0058292	A	05-10-2000	FR AU AU BG BR CA CN CZ EE EP WO HR HU ID JP NO NZ PL RU SK TR TW US ZA	2791346 A1 756855 B2 3301600 A 105923 A 0009281 A 2366829 A1 1353698 T 20013365 A3 200100499 A 1165528 A1 0058292 A1 20010704 A1 0201863 A2 29871 A 2002540195 T 20014632 A 513674 A 351317 A1 2222537 C2 13462001 A3 200102639 T2 534906 B 6506750 B1 200106981 A		29-09-2000 23-01-2003 16-10-2000 31-05-2002 22-01-2002 05-10-2000 12-06-2002 16-01-2002 16-12-2002 02-01-2002 05-10-2000 31-08-2002 28-12-2002 18-10-2001 26-11-2002 26-11-2001 30-05-2003 07-04-2003 27-01-2004 09-05-2002 21-02-2002 01-06-2003 14-01-2003 24-10-2002
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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

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Patent document cited in search report	Publication date		Patent family member(s)	Publication date
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